INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2005/003100

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] C12Q1/48, C12N15/09, C12Q1/68, G01N33/15, G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] C12Q1/48, C12N15/09, C12Q1/68, G01N33/15, G01N33/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CA(STN), GenBank/EMBL/DDBJ/GeneSeq, BIOSIS/MEDLINE/WPIDS(STN), JSTPlus(STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Parniak MA, et al., A fluorescence-based high-throughput screening assay for inhibitors of human immunodeficiency virus-1 reverse transcriptase-associated ribonuclease H activity., Anal Biochem.(2003), Vol.322, No.1, pages 33 to 39	1-12
A	N.McLellan, et al., High-Throughput Method Research report Nonradioactive detection of retroviral associated RNaseH activity in a microplate-based, high-throughput format., BioTechniques(2002), Vol.33, No.2, pages 424 to 429	1-12

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search 26 April, 2005 (26.04.05)	Date of mailing of the international search report 17 May, 2005 (17.05.05)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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PCT/JP2005/003100

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Shao X., et al., Colorimetric assays for evaluation of the mode of action of human immunodeficiency virus type 1 non-nucleoside reverse transcriptase inhibitors., Antivir Chem Chemother.(1998), Vol.9, No.2, pages 167 to 176	1-12
A	Fan N. et al., Simultaneous mutations at Tyr-181 and Tyr-188 in HIV-1 reverse transcriptase prevents inhibition of RNA-dependent DNA polymerase activity by the bisheteroarylpiperazine (BHAP) U-90152s., FEBS Lett.(1995), Vol.370, Nos.1 to 2, pages 59 to 62	1-12

Claims 1 to 12 disclose inventions relating to a method of screening an RNase H inhibitor to a reverse transcriptase by using a substrate which is "a substrate comprising a template hybridized with a primer:

wherein the template is 5'-NRWXZ-3' and the primer is 3'-Y-5' (wherein Y is hybridizable with X in the template);

the template is 5'-NRWX-3' and the primer is 3'-YZ-5' (wherein Y is hybridizable with X in the template); or

the template is 5'-NRWXZY-3' (wherein Y is hybridizable with X in the template);

wherein N represents a 13- to 19-mer DNA, RNA or chimeric nucleic acid;

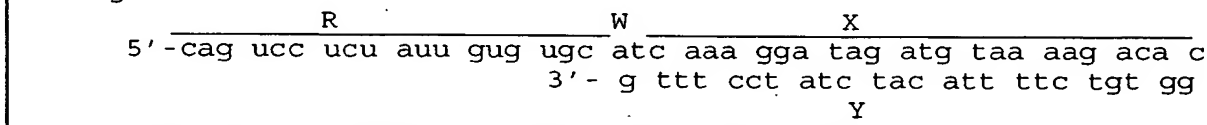
R represents an RNA;

W represents a DNA or a chimeric nucleic acid;

X represents a 15-mer or higher DNA, RNA or chimeric nucleic acid;

Y represents a DNA, an RNA or a chimeric nucleic acid having the same length as X to be hybridized therewith, provided that Y is a DNA in the case where X to be hybridized therewith is a DNA, Y is an RNA in the case where X to be hybridized therewith is an RNA, or Y is a chimeric nucleic acid in the case where X to be hybridized therewith is a chimeric nucleic acid (in the chimeric nucleic acid, Y is a DNA in the case where X is a DNA, or Y is an RNA in the case where X is an RNA); and

Z represents a DNA, an RNA or a chimeric nucleic acid, provided that W and Z may be nil". However, screening of an RNase H inhibitor was confirmed in practice exclusively on the following substrate shown in Fig. 1:



template 5'-NRWXZ-3' :N=0, R=19, W=1, X=1, X=24, Z=0
primer 3'-y-5' :Y=24.

Concerning the test compounds,

use was exclusively made, as control compounds for RNase H inhibitor (compound 1; 4-[5-(benzoylamino)thien-2-yl]-2,4-dioxobutanoic acid), suramin sodium binding nonspecifically to a reverse transcriptase and Nevirapine which is a non-nucleic acid type reverse transcriptase inhibitor. Namely, sufficient statement for carrying out the screening of an RNase H inhibitor for the above substrate in every case is not provided. Thus, it does not appear that the constitution of the invention relating to the above substrate is sufficiently described in the description.

Such being the case, the search was made on the parts supported by the description and disclosed therein, i.e., mainly on EXAMPLES.